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ABSTRACT

Some oral reading errors were found to be more significant than others in evaluating a pupil's performance in reading at six comprehension levels. The percentage of seven kinds of errors (pronunciation, mispronunciation, omission, substitution, addition, repetition, and punctuation) was computed to the levels of reading comprehension for good, average, and poor readers. Thirty fourth-grade students were divided into these three groups based on their stanine scores on the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test. Each subject was then administered individually oral readings and questions from the Standard Reading Inventory until six reading comprehension levels were obtained for each subject. Results showed (1) a significant difference among the means of the six comprehension levels with respect to eerors in pronunciation, mispronunciation, omission, substitution, and repetition; (2) significant differences among good, average, and poor readers with respect to errors in pronunciation, substitution, repetition, and omission; and (3) significant differences in the shape of the curves defined over the six comprehension levels for the three groups of readers with respect to errors in pronunciation and substitution. Tables and references are included. (VJ)

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Relationships Between Selected Oral Reading Errors and Levels of Reading Comprehension for Good, Average, and Poor Readers

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Analysis of the criteria used to determine the independent, instructional, and frustration levels in reading by means of different informal reading tests results in different estimates of the reading level of the pupil. One reason for these variant estimates is that disagreement exists over the significance of the types of oral reading errors. Should all oral reading errors be counted or only those that alter the meaning of a sentence? (5) McCracken (6) reported that it is the number of oral reading errors a child makes when reading that is important and not the kind of error or the error pattern. Goodman (3) defines oral reading errors as miscues indicating the child's interaction

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with the written language. Not all miscues should be given equal value. Christenson (1) found significant differences among the kinds of oral reading errors made at the independent, instructional, and frustration reading level. Nurss (7) suggests that children's oral reading errors may be used to assess their semantic and grammatical understanding of the material they read.

In light of the disagreement among reading specialists about the significance of oral reading errors in evaluating a pupil's performance in reading, it seemed important to investigate the relationship between types of oral reading errors and comprehension, which is the end-point and ultimate goal of the entire reading process.

The purpose of the study was to investigate whether some oral reading errors are more significant than others in evaluating a pupil's performance in reading at six reading comprehension levels. To this end, the study tested hypotheses comparing percentage of pronunciation errors, mispronunciation errors, omission errors, substitution errors, addition errors, repetition errors, and punctuation errors to the level of reading comprehension for good, average, and poor readers.

DESIGN

Thirty boys and girls, selected from a population of

173 fourth grade students on the basis of their stanine scores on the Word Meaning and Paragraph Meaning Tests of the Intermediate I Battery, Form X, of the Stanford Achievement Test, participated in the study. Ten subjects were randomly selected from all those in the population who had received a stanine of 1, 2, or 3 on these tests and were defined for the analysis of the data as poor readers. In a similar fashion, groups of ten each were drawn from stanines 4, 5, or 6 and 7, 8, or 9, and labeled average and good readers, respectively.

After the thirty subjects were chosen on the basis of their stanine scores as mentioned above, they were individually administered oral reading stories and oral reading comprehension questions from the Standard Reading Inventory. All oral readings and responses to reading comprehension questions were recorded on tape for further analysis. These stories and reading comprehension questions were administered until the following six reading comprehension levels were obtained for each of the thirty readers: 91 to 100 per cent; 81 to 90 per cent; 71 to 80 per cent; 61 to 70 per cent; 51 to 60 per cent; and 50 per cent or below. Oral reading errors were scored in the Examiner's Booklet: Standard Reading Inventory during subsequent replaying of the tapes.

Seven separate analyses of variance were computed on the seven types of oral reading errors. The model employed in each case followed a 3 x 6 factorial design with repeated measures across the last factor. Factor A represented the three levels of reading ability: good, average, and poor. Factor B represented the six levels of reading comprehension. Because the B factor involved repeated measures, the Geisser and Greenhouse (2) conservative test was employed. If results were significant, two additional analyses were reported. In the case of significant main effects, Scheffé post-mortem tests were reported. In the case of parallel profiles of the means of the three reading groups across six levels of reading comprehension (i.e., nonsignificant A x B interaction), a joint test procedure recommended by Geisser and Greenhouse was reported.

STATISTICAL ANALYSIS AND DISCUSSION

Table I summarizes the results of the seven separate univariate analyses. Hypothesis one, that there is no difference among the means of the six comprehension levels with respect to the selected oral reading errors, was rejected for pronunciation errors, mispronunciation errors, omission errors, and substitution errors at the .01 level and for repetition errors at the .05 level. There were significant differences found in the means of these errors at

TABLE I

SUMMARY OF SIGNIFICANT MAIN EFFECTS AND A x B INTERACTION FOR THE SEVEN SEPARATE UNIVARIATE ANALYSES OF VARIANCE

Criterion	A	B	A x B
Pronunciation Errors	**	**	**
Mispronunciation Errors		**	
Omission Errors	*	**	
Substitution Errors	**	**	**
Addition Errors			
Repetition Errors	**	*	
Punctuation Errors			

NOTE: Significance levels reported for B and A x B effect were evaluated by employing the Geisser and Greenhouse conservative test.

*$p < .05$
**$p < .01$

the six levels of reading comprehension. The number of pronunciation errors, mispronunciation errors, omission errors, substitution errors, and repetition errors appeared to increase as the level of reading comprehension decreased. This hypothesis was accepted with respect to addition errors and punctuation errors. These results for the seven oral reading errors apply to the means of subjects from all three reading groups.

Hypothesis two, that there is no difference among good, average, and poor readers with respect to the selected oral reading errors, was rejected for pronunciation errors, substitution errors, and repetition errors at the .01 level, and for omission errors at the .05 level. There were significant differences found among good, average, and poor readers with respect to these errors. Good and average readers were significantly different from poor readers. Poor readers made the greatest number of pronunciation errors, omission errors, substitution errors, and repetition errors across the six levels of reading comprehension. This hypothesis was accepted with respect to mispronunciation errors, addition errors, and punctuation errors. These results cannot be applied to the individual reading comprehension levels.

Hypothesis three, that there is no difference in the shapes of the curves defined over the six levels of reading

comprehension for the good, average, and poor readers with respect to the selected oral reading errors, was rejected for pronunciation errors and substitution errors at the .01 level. Only the pronunciation errors and substitution errors analyses showed a significant interaction, which implies that the profiles of means for the three reading groups were not the same. The profile of poor readers across the six levels of reading comprehension with respect to pronunciation errors revealed a sharp increase in pronunciation errors as the level of reading comprehension decreased. This sharp increase in pronunciation errors occurred after the poor reader reached the reading comprehension level associated with the instructional reading level. The profiles of good and average readers revealed increases in pronunciation errors across the reading comprehension levels, but these increases were slight in comparison to the poor readers'. The profile of poor readers across the six levels of reading comprehension with respect to substitution errors revealed a sharp increase in substitution errors as the level of reading comprehension decreased. This sharp increase in substitution errors occurred after the poor readers reached the reading comprehension level associated with the questionable instructional reading level (61-70 per cent reading comprehension level). The profiles of good and average readers revealed decreases

and increases in substitution errors across the reading comprehension levels, but these changes were slight in comparison to the poor readers'. There were no significant differences in the shapes of the curves defined over the six levels of reading comprehension for the good, average, and poor readers with respect to the number of mispronunciation errors, omission errors, addition errors, repetition errors, and punctuation errors. Thus, it was concluded that the shapes of the profiles for the above errors were the same. This, however, does not imply coincidence, and appropriate joint tests were employed. The significance of the appropriate joint tests for profile clusters at the .01 level for repetition errors and the .05 level for omission errors indicated that the vectors of means with respect to these two types of errors for the three reading groups did not come from the same population. Therefore, the profiles were not coincident. Joint tests for profile clusters were not employed in evaluating the implication of coincidence in shapes of mispronunciation error means, addition error means, and punctuation error means because of the nonsignificant difference found in levels of reading ability. The profiles of means for the three reading groups at the six reading comprehension levels with respect to omission errors and repetition errors revealed that the profile of poor readers was different in position, though not in shape, from

that of the profiles of good and average readers. The profiles of poor readers revealed poorest performance with respect to these errors across the levels of reading comprehension. The number of errors increased at a much greater rate as the level of comprehension decreased. The profiles of good and average readers revealed significantly better performance with respect to these errors across the six levels of reading comprehension, but the number of these errors also appeared to increase as the level of reading comprehension decreased.

CONCLUSIONS AND IMPLICATIONS

Based on the statistical results of this investigation, it appeared that:

1. Pronunciation errors, mispronunciation errors, omission errors, substitution errors, and repetition errors merit consideration as criteria for evaluating a pupil's performance in reading.

2. Though addition errors and punctuation errors have been reported in the literature as significant oral reading errors, their value was not confirmed in this study. These oral reading errors did not discriminate among the six reading comprehension levels defined in this study.

3. The means of good and average readers were significantly different from the means of poor readers with

respect to the number of pronunciation errors, omission errors, substitution errors, and repetition errors. Poor readers made significantly more of these kinds of errors than did better readers, even when the reading comprehension levels were similar. If similar levels of reading comprehension are used to define placement levels for good, average, and poor readers, then the number and kind of reading errors expected at the placement levels of poor readers will have to be modified.

4. Good, average, and poor readers were not different with respect to the number of mispronunciation errors, addition errors, and punctuation errors. Although poor readers have been reported (4) to make more of these kinds of oral reading errors than good and average readers, this was not true for the poor readers in this study.

5. Although the shapes of the profiles for good, average, and poor readers were reported to be alike with respect to repetition errors and omission errors, they were not coincident. The good, average, and poor readers in this study with respect to the above oral reading errors came from different populations.

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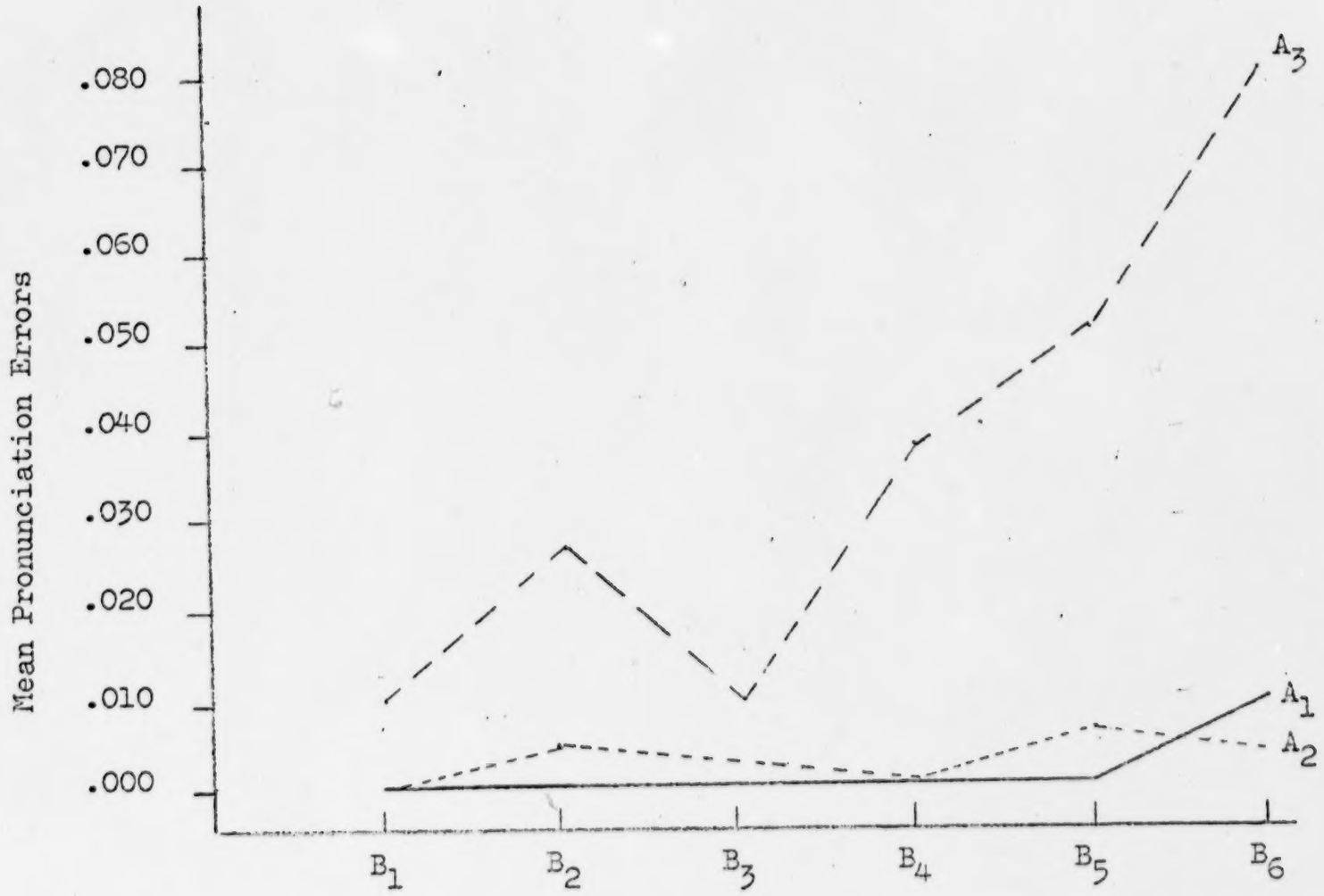

Figure 1

Profiles of Means for Reading Groups at the Six Levels of Reading Comprehension (criterion: pronunciation errors)

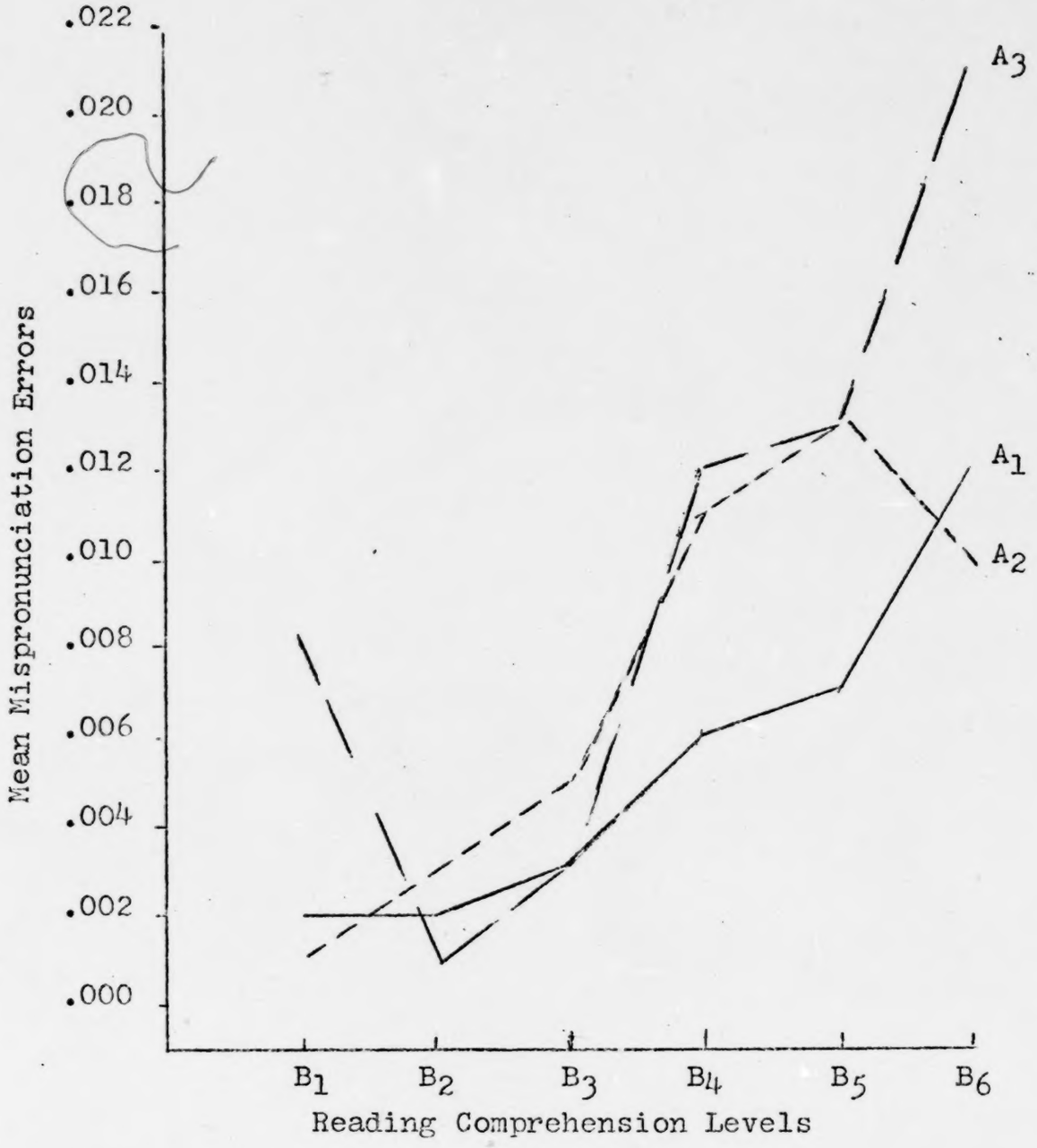

Figure 2

Profiles of Means for Reading Groups at the Six Levels of Reading Comprehension (criterion: mispronunciation errors)

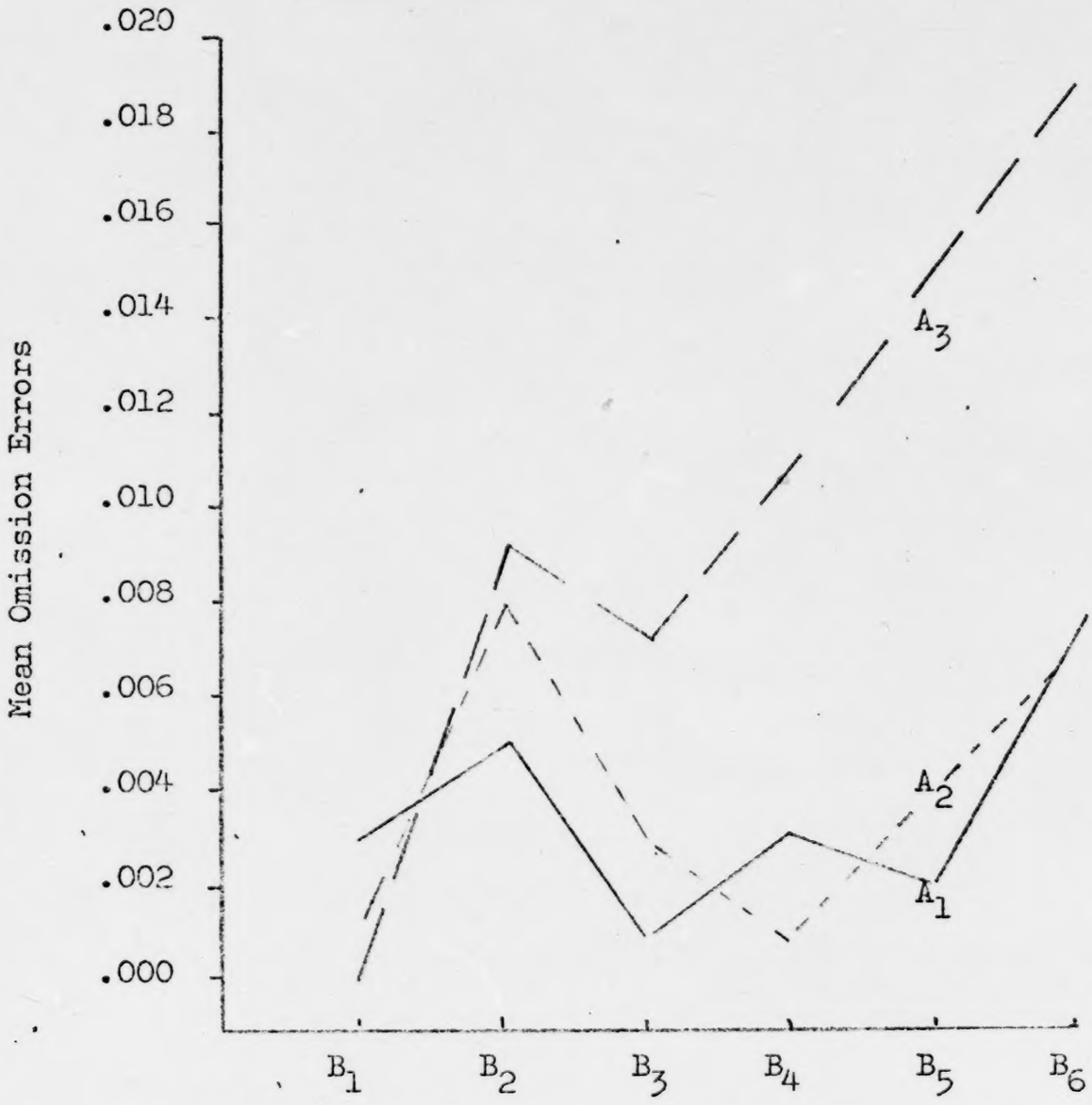

Figure 3

Profiles of Means for Reading Groups
at the Six Levels of Reading Comprehension
(criterion: omission errors)

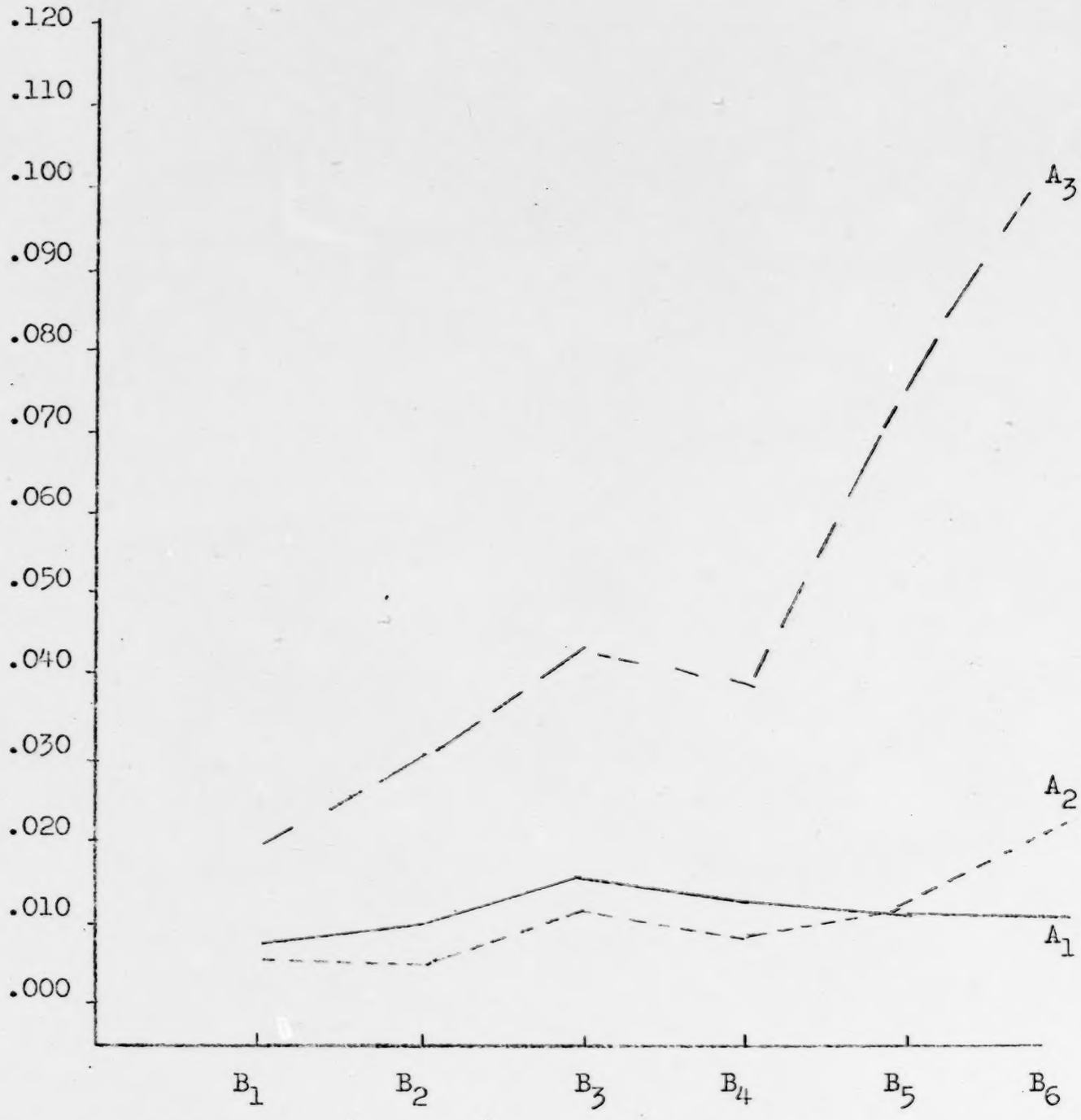

Figure 4

Profiles of Means for Reading Groups at the Six Levels of Reading Comprehension (criterion: substitution errors)

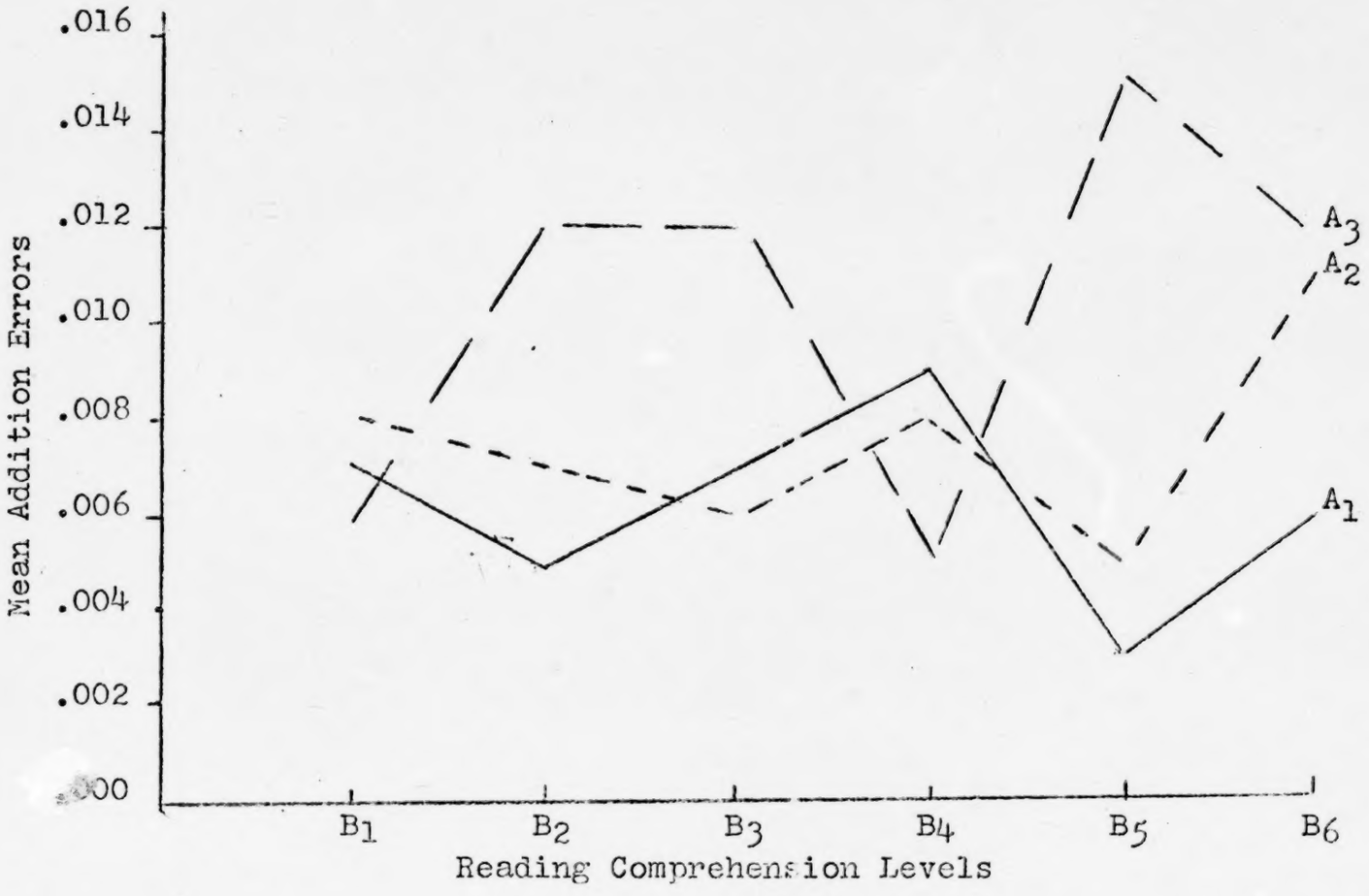

Figure 5

Profiles of Means for Reading Groups at the Six Levels of Reading Comprehension (criterion: addition errors)

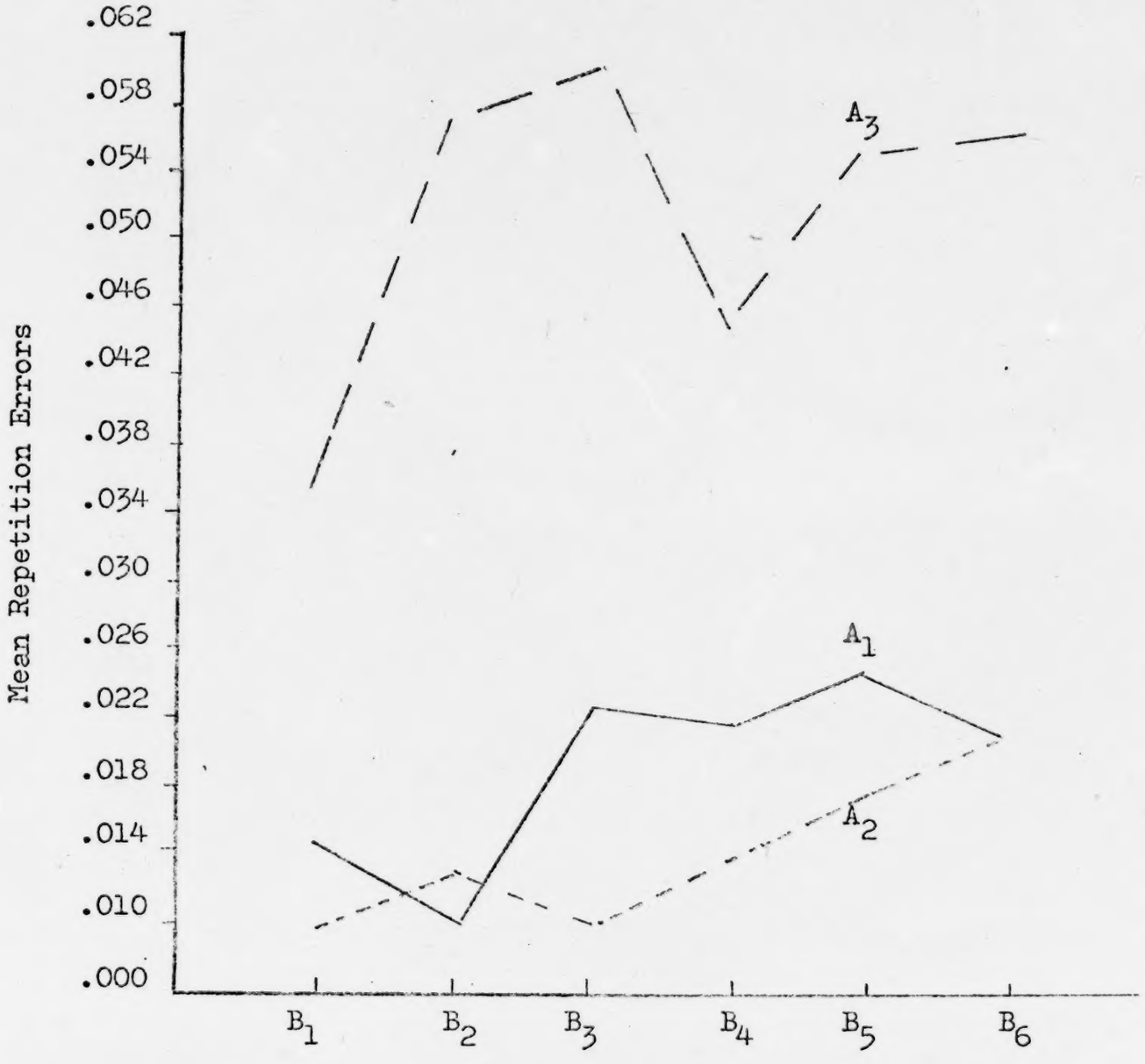

Figure 6

Profiles of Means for Reading Groups at the Six Levels of Reading Comprehension (criterion: repetition errors)

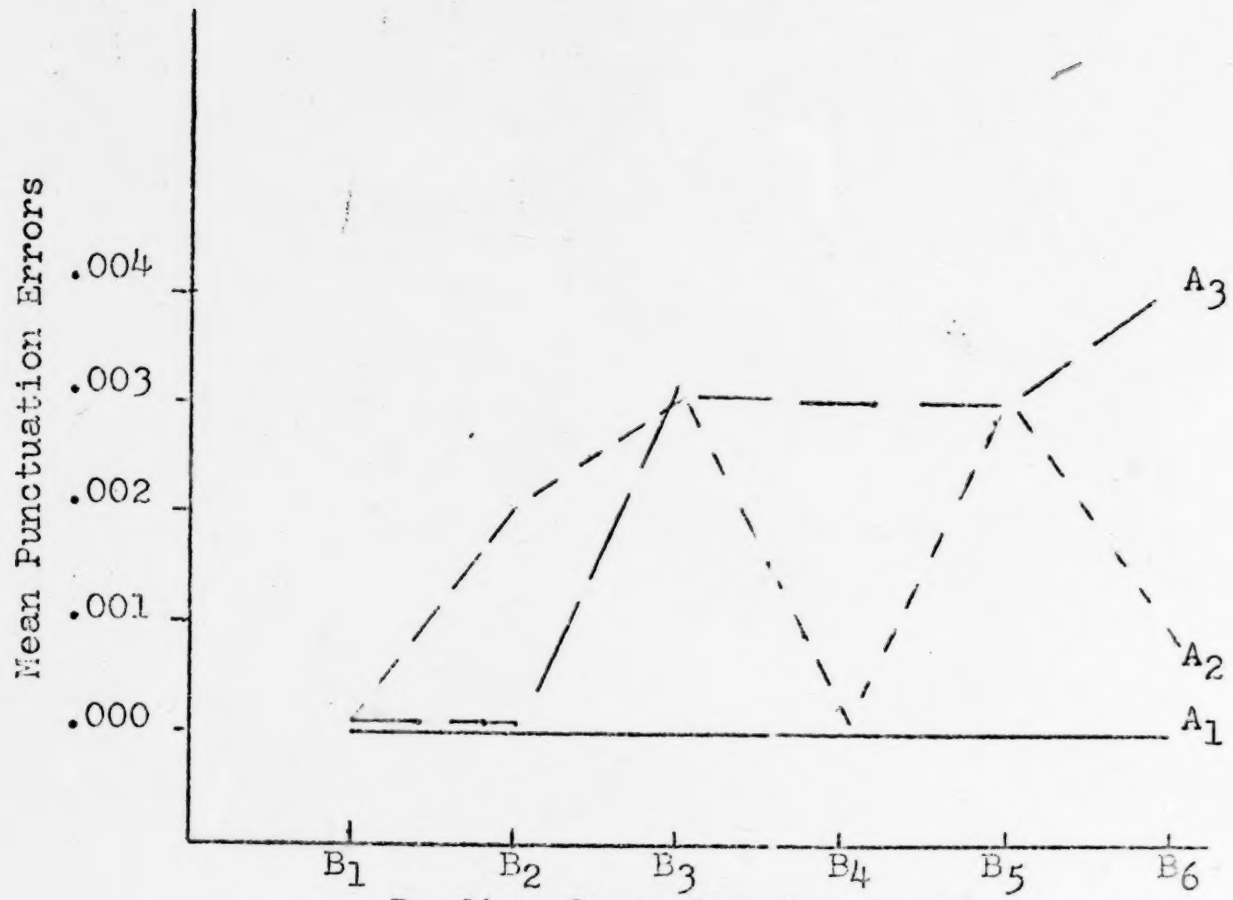

Figure 7

Profiles of Means for Reading Groups at the Six Levels of Reading Comprehension (criterion: punctuation errors)